2013 Prequalification Category Descriptions and Requirements

Each category that requires a Connecticut Professional Engineer (or Architect, if applicable), the employee identified as 'in responsible charge' must be registered in the State of Connecticut. The firm must also hold the appropriate Connecticut Corporate Engineering or Architecture License as applicable with Connecticut State Statutes.

Copies of these licenses and required certifications and registrations that indicate they are valid and in current standing must be included in your submittal in order to be prequalified in these categories.

Please only attach the licenses, registrations and certifications as required, in a separate section of your prequalification submittal as indicated in the "Instructions for all Prequalification Submissions". Such licenses/certifications/registrations must show a date that indicates that they are in current standing. Extraneous certifications, licenses, and registrations should NOT be included (ie. other state PE licenses, EIT's, First-aid, CPR, etc.)

1. **Airport Design**
   Design of runways, taxiways, aprons, and electrical systems; obstruction identification and resolution
   License Requirement: Connecticut Professional Engineer

2. **Bridge and Structure Inspection**
   Structural inspection and load evaluation of highway and railroad bridges, signal and sign supports, towers, piers, wharves, buildings and special structures
   License Requirement: Connecticut Professional Engineer

3. **Bridge and Structure Inspection (Underwater)**
   Inspection of the underwater components of any bridge or structure including inspection of above water components, and construction activities
   License Requirement: Connecticut Professional Engineer

4. **Bridge and Structure Design**
   Design of highway and railroad bridges, culverts, sign and signalization supports, towers, structural repairs, and special structures
   License Requirement: Connecticut Professional Engineer

5. **Claims Analysis**
   Analysis, prevention, and defense of construction project claims; and critical path method schedule evaluation

6. **Coatings Inspection**
   Inspection of painting/coating of bridges, coating failure analysis, specification preparation and review, coating system review and recommendations, laboratory analysis, containment analysis for worker protection in hazardous paint removal environments, training in coatings inspection and other related services and expert witness testimony
   License Requirement: Connecticut Professional Engineer
   Certification Requirement: NACE Coatings Inspectors or SSPC Bridge Coating Inspectors (BCI)

7. **Construction Engineering and Inspection (Road, Bridge, and Aviation)**

Resident inspection, constructability reviews, construction schedule reviews, cost estimating, quality assurance reviews, nuclear density testing, construction survey and office engineering for road, bridge, traffic, illumination or lighting, and aviation construction projects

License Requirement: Connecticut Professional Engineer

Requirements for Inspection staff (minimum): NICET Level II certification in Transportation/Highway Construction, or a Bachelor of Science Degree in a relevant engineering or construction field

8. **Construction Engineering and Inspection (Facilities)**

Resident inspection, constructability reviews, construction schedule reviews, cost estimating, quality assurance reviews, nuclear density testing, construction survey and office engineering for all types of facilities, including railroad stations, buildings, bus maintenance and storage facilities, parking structures, warehouses and terminals, piers, wharves and ferry facilities

License Requirement: Connecticut Professional Engineer

Requirements for Inspection staff (minimum): NICET Level II certification in Transportation/Highway Construction, or a Bachelor of Science Degree in a relevant engineering or construction field

9. **Construction Engineering and Inspection (Rail)**

Resident inspection, constructability reviews, construction schedule reviews, systems analysis reviews, quality assurance reviews, cost estimating, nuclear density testing, construction survey and office engineering for track, power, catenary, communications and signals, and rolling stock specification and design review

License Requirement: Connecticut Professional Engineer

Requirements for Inspection staff (minimum): NICET Level II certification in Transportation/Highway Construction, or a Bachelor of Science Degree in a relevant engineering or construction field

10. **Environmental Compliance (Soil, Groundwater)**

Provide regulatory compliance services, environmental site evaluations, subsurface site investigations, water quality monitoring, soil and groundwater remediation designs, inspection and environmental compliance oversight during construction and remediation

License Requirements: Connecticut Professional Engineer, and CT Environmental Professionals

Certification Requirements: Industrial Hygienist or Hazardous Materials Manager

(NOTE: one person can hold all of the requirements for this category)

11. **Environmental Compliance (Asbestos, Paint)**

Conduct asbestos, lead and household hazardous waste investigations, preparation of design plans for abatement, waste removal and structure demolition, inspection and compliance services during abatement and demolition, and air quality compliance

License Requirements: Connecticut Professional Engineer, and CT Asbestos Consultant-Inspection/Management Planner, and CT Asbestos Consultant-Project Designer, and CT Asbestos Consultant-Project Monitor

Certification Requirements: CT Lead Planner/Project Designer, and CT Lead Inspector, and CT Lead Inspector Risk Assessor, and Industrial Hygenist

Registration Requirement: Asbestos Analyst

(NOTE: one person can hold all of the requirements for this category)

12. **Environmental Planning Studies and Regulatory Permitting**

State and Federal environmental documentation to comply with the National Environmental Policy Act (NEPA) and the Connecticut Environmental Policy Act (CEPA) for all modes of transportation including passenger and freight, wetland delineation and studies, stormwater management, water resources, land use, ecological, noise, air quality and historic/archaeological studies

License Requirement: Connecticut Professional Engineer

13. **Facility Design (All Modal Buildings/Vertical Structures)**
    Terminals, stations, pedestrian bridges and tunnels, maintenance facilities, storage facilities, parking lots/structures, piers, wharves, docks, warehousing, ferry facilities, renovations, and ADA compliance
    License Requirement: Connecticut Professional Engineer and/or Connecticut Architect

14. **Highway Design**
    Roads, drainage, hydraulics, geotechnical and subsurface investigations, pavement design, landscape architecture, illumination, incidental structures, property mapping, title searching, environmental permitting and stormwater certification, sanitary sewer design, contract development, and cost estimating
    License Requirement: Connecticut Professional Engineer

15. **Intelligent Transportation Systems (ITS)**
    Preparation and design of ITS including automatic vehicle location systems, radio systems, fare collection systems, information systems and technology to transport infrastructure, traffic management systems, operations center modifications, incident management systems, diversion routes, operational systems development, system integration, ITS Systems Engineering; Statewide/Regional ITS Architecture; and maintenance and repair specifications
    License Requirement: Connecticut Professional Engineer

16. **Materials Testing and Fabrication Inspection**
    Inspection, sampling and testing of various construction materials at various locations throughout Connecticut and the United States that may include steel fabrication, structural steel coating process, precast, prestressed and post tensioned concrete fabrication, aggregates, and hot mix asphalt
    License Requirement: Connecticut Professional Engineer
    Certification Requirements: AWS Welding Inspector (CWI); and NACE Coating Inspector
    (NOTE: one person can hold all of the requirements for this category)

17. **Modal Transportation Planning Studies**
    (Highway, Transit, Rail, Ports/Waterway, and Aviation for Passenger and Freight; and Bicycle/Pedestrian)
    Data collection, traffic counting, travel demand analysis, forecasting and modeling, commodity flow analysis, alternatives analysis, noise impact and abatement analysis, operational analysis, service design and management studies, marketing/maintenance studies and plans, facilities needs and conceptual plan development, operational analysis, implementation plans, intermodal planning studies and connectivity evaluation, strategic long range plans, system plans, master plans, long range transportation plans, asset management plans, performance measurement strategy studies, layout plans, needs and deficiency analysis, feasibility studies and plans, land use and development analysis, lease analysis, financial assessment, economic impact analysis, constructability analysis, environmental analysis, public involvement process, implementation plans, technical documentation, reports, and grant writing
    License Requirement: Connecticut Professional Engineer

18. **Rail Design**
    Track, power, catenary, rolling stock, communications and signals including specification development and system design reviews
    License Requirement: Connecticut Professional Engineer

19. **Traffic and Safety Engineering**
    Operational analysis, traffic signals and signal systems, signing, pavement markings, traffic data collection, traffic studies, railroad-highway grade crossings, maintenance and protection of traffic, crash analysis, economic analysis, safety project recommendations, project selection and prioritization, roadway safety audits, crash modification factors, strategic plans, implementation plans, studies, technical documentation and reports.
    License Requirement: Connecticut Professional Engineer